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PELIOSIS RHEUMATICA IN CHILDREN, WITH A BRIEF REVIEW OF THE LITERATURE AND REPORT OF CASES.* †

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In perusing the articles on purpura in the various text books, one notices a lack of conformity as regards classification. An etiologic classification is difficult and unsatisfactory on account of our meagre knowledge of the causation of this disease. Owing to the uncertain etiology, it is unscientific to make an etiologic factor the basis of a classification. It would be more justifiable to classify the various types according to the clinical signs and symptoms. We are aware that as soon as the microbic features of these diseases are better understood we shall have a classification based on our bacteriologic and pathologic knowledge. A practical classifi-

cation is that of Unger, which is here appended:—

1. *Purpura Simplex*.—This is characterized by the occurrence of hemorrhages into the skin, the mucous membranes and viscera not being involved.

(a) *Primary or idiopathic purpura simplex* occurs *sui generis*. (b) *Secondary or Symptomatic purpura simplex* occurs in the course of infectious and cachectic diseases, and in toxic and neurotic conditions.

2. *Purpura Hemorrhagica or Morbus Maculosis Werlhofii*.—This is a distinct disease, in which the cutaneous hemorrhages are severe, and in which there are in addition hemorrhages from the mucous membranes.

3. *Purpura Fulminans*.—This is a very severe purpura occurring in young children, and is as a rule rapidly fatal.

4. *Peliosis Rheumatica or Schoenlein's Disease*.—This is an affection characterized by purpuric eruptions in connection with multiple arthritis. Little is known about the etiology. Schoenlein regarded peliosis as of rheumatic origin; this view was also held by Schmitt. The frequent occurrence of

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sore throat at the onset and the arthritic symptoms are in favor of this view. Most modern authorities, however, look upon peliosis as a distinct affection in which the arthritis is merely a symptom. Monti says that the disease never occurs in nursing babies, nor is it ever complicated by cardiac trouble. Baginsky believes that it is not of rheumatic origin, because it is never followed by endocarditis. There are certain clinical features in both acute rheumatic fever and peliosis rheumatica, which seem to indicate a correlation between these diseases, especially since it is now claimed that the former is of bacterial origin.

The onset of peliosis is usually with sore throat, mild febrile disturbance and articular pains. The joints most frequently affected are the ankles and knees; the joints of the upper extremities are involved more frequently in children than in adults. The joints are painful, tender, not reddened, and very little swollen. The articular pain is severe as the rash appears, but diminishes as the eruption develops. There is no definite course to the temperature, which is seldom above 101 degrees F. The urinary changes are those of acute congestion of the kidney. Tender nodular infiltrations are sometimes seen beneath the skin.

Though relapses often occur (especially in children) yet the disease runs a self-limited course and the prognosis is good.

In children the constitutional symptoms are milder than in adults; on the other hand the rash is more extensive, more joints (including those of the upper extremities) are apt to be involved, the disease is of longer duration, re-

currences are more common, and tender subcutaneous nodes are more frequently seen. Unger says that in children there often occurs edema about the lumbar region of the spine; such a case I recently saw in private practice.

The early literature of peliosis rheumatica was reviewed by Wirtz in 1869. The first to notice the condition seems to have been Bateman, who in 1801 described it under the name of "purpura urticans." In 1835 Rayer wrote about "roseola rheumatica." Curiously enough nothing was ever written about peliosis by Schoenlein, after whom the disease is named. Fuchs, who was Schoenlein's assistant for fifteen years, says that the latter regarded peliosis as a distinct rheumatic disease. By Fuchs the course of the disease was divided into the following four stages:—1. Stadium prodromi; 2. Stadium eruptions; 3. Stadium efflorescentiæ; 4. Stadium desquamationis. This author lays great stress upon the desquamation, which he says follows the eruption, and differentiates peliosis rheumatica from simple purpura by the absence of the desquamation in the latter. The duration is given as ten days to three weeks, and the prognosis favorable. Fuchs believed that the disease never occurs in childhood.

Schmitt seems to have been the first writer to speak of peliosis in children (1860). He, however, merely regarded the condition as a complication of rheumatism. In 1867 Henoeh reported 2 cases in children, seven and eight years old, respectively. In 1872 Kaltenbach described a case in a boy ten years of age and speculated as to the etiology and pathology. The fact that there is first pain in the joints and

men an eruption made him think of an infection followed by the action of toxins, which cause changes in the blood or walls of the blood vessels. Henoch describes 6 cases in his "*Kinderkrankheiten*." Cases have been reported by Hebra, Rohring, and others. Very little has been written on peliosis during the past ten years.

The case to be specially described occurred in the ward of Dr. Koppik while I was on service, and presented certain special features:—(a) the multiplicity of the arthritis; (b) the presence of purpuric spots in the mouth and on the parts of the body other than the inflamed joints; (c) the abdominal symptoms; and (d) the presence of tender subcutaneous nodes.

HISTORY.—The patient, I. F., male, eight years of age. Inquiries as to etiological factors in the heredity, surroundings, feeding, etc. were negative. The child had had measles and pneumonia; otherwise the previous history was negative.

Two weeks before admission to the hospital, the boy complained of pain in the left foot; he was feverish, and went to bed. The foot became slightly swollen, and an eruption appeared about the ankle joint; these symptoms disappeared in three days. Then the right foot became similarly affected. After the inflammation in the right ankle had subsided, the right and left wrists became painful; there was no eruption about the wrists. Next, both shoulders became affected, and the eruption appeared about these joints as the pain subsided; the right shoulder was affected first.

Other symptoms were pain in the abdomen and diarrhea. There were no

headache, no epistaxis or bleeding from the gums, no sore throat, no pruritus, no blood in the stools. Urination and defecation were normal. The patient had remained in bed since the onset.

Physical Examination showed the following:—An eruption was present on the left buccal mucous membrane, on the hard and soft palate, and on both pillars of the fauces. There was a diffuse purpuric rash on the neck, on both arms, in the groins, on the scrotum and buttocks, on both knees and both feet. The right shoulder, left elbow and left ankle were tender. The abdomen was acutely sensitive to pressure, and palpation was difficult. Nodular infiltrations were present; one was on the anterior aspect of the upper portion of the right arm; another was on the extensor surface of the middle third of the right forearm; these nodes were extremely tender. Examination of the heart, lungs, liver and spleen was negative. The temperature was normal, pulse 120 and of good quality. The hemoglobin amount was 65 per cent.; otherwise the blood was normal; no leukocytosis. A blood culture was taken and observed for seven days; no growth. The urine contained a trace of albumin; otherwise it was negative. On the day of admission there were several movements from the bowels; the feces were soft, light in color and contained mucus and blood.

During the first week of observation, the symptoms gradually abated. The rash gradually faded; the abdominal tenderness diminished; the arthritic pains became less severe; and, though the diarrheal movements continued, the feces no longer contained mucus and blood.

During the second week of observation, there was a slight elevation of temperature. A new crop of spots appeared over both elbows, which joints were painful. There was a recurrence of the abdominal tenderness. For the first time a cardiac murmur was heard. It was systolic in rhythm, distinctly audible over the lower precordium, loudest at the apex, and not transmitted into the left axilla. The heart's action was regular and forcible, but not enlarged. The urine still contained a trace of albumin, a few hyalogramular casts, a few red blood cells and a few leukocytes.

In the third week, the temperature was again normal, the spots faded, the articular pains disappeared, and the cardiac murmur was no longer audible. There, was, however, a fresh eruption on the buttocks, thighs and scrotum. The nodes were no longer distinctly palpable or tender. The bowels moved from once to three times daily and no longer contained blood. The urine again became normal.

During the next two months the condition of the patient continuously improved. Occasionally, there would be a recurrence of the pain in the joints, hemorrhagic rash, and abdominal pain. The patient, however, was up and about, and rapidly gained weight and strength. Finally, about three months after the onset of the disease, the boy was discharged entirely cured.

Since this article was written the writer has seen 3 additional cases of peliosis rheumatica in children; one a boy fourteen, another a boy eight, and the third a girl eight years of age. The symptoms in all these cases resembled closely those in the case reported above.

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Treatment of Diabetes in Children.

Griffith (*Proceedings Philadelphia County Medical Society*, September, 1902) says that diabetes in children is rare, about 765 cases have been reported by seven writers, some of which are duplicated by the different authors. The treatment does not differ materially from that in adult life, except that in infancy it becomes increasingly difficult, owing to the fact that the child depends upon milk. In one case the use of antipyrine without material alteration of diet apparently resulted in cure. He recommended sodium salicylate, arsenic and codeine.—*Phila. Med. Jour.*

**PROTECTIVE MEDICATION FROM
A HYGIENIC POINT OF VIEW.**

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The embodiment of those measures which conduce to health may be included under the general term of prophylaxis.

The successful use of sanitary measures may avail for prevention of all diseases of all kinds. The sanitary result is embodied in the general expression, *sana mens in sano corpore*.

The recuperative power of the physical organization may avail to prevent the development of disease and keep the body in a state of health.

The influence of curative agents in arresting and modifying disease, does not come properly under the head of preventive medicine, but under the general classification of therapeutic agents. The one class of cases included under the heading of curative agents, may be to a smaller or greater extent recognized in all treatment of disease.

The object in view of this paper is to point out the effects of remedies used for the protection of the individual or individuals against entrance or development of disorder in the body. They may apply to individuals, families and municipalities, and to the wider and greater body of people throughout the country.

The general expression of health is claimed to be attended ordinarily by the *vis medicatrix naturae*. It is generally conceded that the natural performance of the functions of the body is independent of any agency of a medical character, and comes under the general

head of the healing powers of nature. We understand that the observance of the laws of health, by individuals, is avoiding exposure to any source of disorder, whether from within or without.

It is not considered safe for individuals to use food of any kind that may disturb the digestion, and in case of derangement of the digestive organs, the use of measures to prevent this derangement is indicated.

The original component elements of the tissues may not be disordered and yet the functions of the part may be modified very materially.

The classification that is generally adopted in treating of sanitary influences, extends through all the conditions which affect it, and the proceedings of Boards of Health for the prevention of disease, are directed usually to the correction of all disorders which may terminate in disease. Hygiene on a general scale is extended to the general parts of country that may be liable to infection of diseases of various kinds.

The departure from the standard of health in an individual may be limited in its extent and its severity. Those cases which result from change in the body, constituting previous dispositions to disease, are the class of disorders to which the use of preventives is especially applicable. We need not await the actual developments of disease for a resort to preventives, but may use in advance the means of relief, which may put a stop to the tendencies of functional disorders. It is evident that some persons are more liable to certain diseases than others, and it is likewise evident that some are more amenable to treatment in advance of any organic disturbances.

A recognized distinction between functional and organic diseases, leads us to consider functional diseases alone, amenable to preventive treatment. While the disorder is confined to a mere function of the part it may be subjected to preventive measures, but when it has invaded the organic structure of the parts affected, it is no longer a subject for preventive treatment.

Some classes of remedies depend upon the modification embraced by the nerves and blood vessels in the early manifestations of trouble, and it is during this stage that preventive medicine is applicable.

We understand by functional disorders those disturbances which act directly upon the nerve centers, and thereby modify the condition of the parts to which they are distributed.

We do not propose to go minutely into the process by which the development of disease is prevented, but to point out the greater or less departures which may be treated in this way. It sometimes occurs that very simple means suffice for the prevention of disease, and it is preferable to act upon the old principle, that an ounce of prevention is worth a pound of cure.

MUNICIPAL HYGIENE.

The comfort and advantages derived by a community in close proximity and the prompt supply of personal wants by a reciprocity of favors, are great.

In disease many citizens may be unable to definitely calculate the benefits of organized means of securing public health in the State and city government. The first attempt of this kind was made in London about 1846, at the beginning of the Victorian age, when the practical men of that country es-

tablished a system of registration of births and contagious diseases. Gradually the system was adopted by other places in Great Britain and Ireland and in the United States. The statistics thus collected were studied, and a careful consideration of their import led to the general acceptance of certain fundamental truths.

Whether the bacillus of yellow fever has been isolated or not may still be doubted, but it is evident that Domingos Freire has discovered a process for separating an attenuated virus from those laboring under yellow fever, which by inoculation protects those who would otherwise be attacked with the disease. A large number of those inoculated have been found immune after their inoculation, and the record shows that very few cases have taken yellow fever, thus demonstrating its efficacy as a preventive measure.

The reports of his own inoculation with the attenuated virus made by Dr. H. M. Lane, published in the medical journals about fifteen years ago, gives fully the history of the changes wrought by inoculation, and his subsequent freedom from yellow fever from which many valuable lives of missionary workers in Brazil were victims, without inoculation, notwithstanding it was well known to give exemption from this disease.

The only serious contestant for the honor of finding the yellow fever bacillus is Sanarelli, yet he has not demonstrated its protective influence so clearly as Freire has shown the prophylactic power of his inoculation.

The recognition of the virtues of Freire's inoculation by the people of his own country with the attenuated

virus of yellow fever, and the large number of subjects rendered immune by it, goes to prove its efficacy as a preventive measure.

The efficacy of the injection of the culture for the special treatment of rabies in affected animals is undoubted, and the treatment should be resorted to before any signs of the disease appear to secure a prophylactic effect.

Pasteur Institutes are established in New York, Baltimore, Chicago and Atlanta. They show a small percentage of mortality in this mode of treatment.

The great life-saving process of vaccination, introduced by Jenner as a prophylactic against small pox, has secured the confidence of a large proportion of the profession, and people of this country; and yet, strange to say, it is found that a considerable element of the British people discard the use of vaccination as prophylactic against small pox. No greater boon has ever been given to the human race than vaccination, and it is preventive medicine which appeals strongly to our confidence in all cases to avoid small pox.

SCARLET FEVER.

One of the most serious forms there is of disease is scarlet fever, and the uncertainty connected with its control or extension to others, causes it to be greatly dreaded in families. It is generally regarded by physicians and people as a contagious disease, but it has not, however, characteristics of contagious diseases so developed as measles and other cutaneous eruptions. It so happens at times that a case of scarlet fever may appear in a family, and not extend to other members of the family. While all due caution is ex-

ercised by municipal authorities to notify people of the existence of scarlet fever, there is no reason to believe that its propagation is of a nature of contagion. Whether a popular view of prophylaxis be used successfully or not there is a prevalent impression that prophylactic treatment towards members of a family exposed to scarlet fever can be employed with good results.

It is generally believed that extract of belladonna may be relied upon as a prophylactic, but the statistics on this subject are not of a character to satisfy a critical investigation. In many instances, however, this has been employed with the children in a family where a case has occurred, and the disease has not extended to others in the same house. This would encourage families to resort to this method with a reasonable expectation of getting a salutary effect from its administration or use.

It is not supposed that in the use of belladonna as a prophylactic against scarlet fever that other measures are ignored. If the bowels are costive, a laxative of sulphur and cream of tartar every two days is indicated. If the skin is dry and hot, olive oil should be rubbed over the surface night and morning, and whether the throat is giving trouble or not, it should be swabbed out every morning with spirits or turpentine. This course is applicable in all cases.

When a member of a family is attacked with scarlet fever the patient should be isolated from all other members of the family, excepting those required to nurse the case. It is impossible to determine with accuracy how much prophylaxis avails to protect

those subjected to treatment, as there are many instances in which only a solitary case occurs in a family without using prophylactic measures.

It was formerly held that only children were attacked, but in these later years, adults are also liable to it, and it may prove a serious disease in them as well as children.

It is no part of my plan to go into the details of any prophylactic treatment, but I have presented these points as illustrating the importance of correcting any sort of departure from the normal standard of the physical organism that may occur while carrying out the line of prophylactic regimen. Of course there is no indication for the preventive medicine when the case is fully developed as scarlet fever.

It has fallen to the writer's lot to see quite a number of goitres as large as the head of the party whose neck was affected. But for our demonstration of the preventive measures, the treatment must be resorted to internally and locally at an earlier stage of enlargement, and I can give assurance of its disappearance promptly. As the existence of goitre in women is most frequently brought to the physician's notice on account of the ugly deformity of the neck, notwithstanding the high collars to conceal it, which do not suffice to save the sufferer from observation, they insist upon treatment for its removal, at the earliest period that may be possible. It is a rare thing to find a case of goitre requiring a resort to the knife or cautery, and there are not often indications for special surgical treatment even in the advanced stage of disorganization of the glandular structure.

My observation of the internal use of the concentrated preparation of Lugol's solution of iodine in doses of ten drops largely diluted with water three times a day, gradually increased to double that amount, taken before meals, is that any further development is effectually prevented. For external application the compound iodine ointment night and morning meets the demands for relief of goitre.

Among the simple remedies used by those dependent upon their own treatment is burnt sponge taken with any vehicle that may be agreeable to the taste of the individual. It is supposed that the iodine in the sponge serves a good purpose. The writer has found the tincture iodine efficacious when employed by the galvanic current in the form of cataphoresis upon the positive electrode covered with cotton, on one side of the goitre, and the negative sponge electrode upon the opposite side of the enlarged gland. It will appear evident that the electric current is the means of carrying medication through the gland, and the agent which renders the iodine effective in accomplishing the atrophic degeneration of the glandular structure.

The current need not be so strong as to be painful, and a six cell battery will serve the purpose for cataphoresis. An application for ten minutes is usually attended with redness of both poles of the battery, and may lead to such irritation as to require that the force of the current be made weaker.

CARCINOMA.

In treating of the prophylaxis of carcinoma C. B. Keely states that if we grant the *materies morbi*, which is most likely a living organism, the situation

generally attacked suggest (1) that its specific cause flourishes in either the secretions or the cells of the skin glands, including the mammary gland, e. g. milk, butter, cheese, sebum and sweat; and (2) that before the former are allowed to rest in contact with weakened parts, e. g., ulcerations either inside or outside the body, they should be sterilized by heat, while the secretion of the skin glands should be kept away by cleanliness. Almost all primary carcinomas are seated in the breast, alimentary canal, skin and uterus or in ducts or gland subsidiary to or directly opening into these, e. g., liver, pancreas, vagina. Searching for a likely or possible carrier of the essential cause of cancer to two such different localities as the breast and a segment of the alimentary canal he first thought of water. Its possible responsibility is not to be lightly denied but there are several conditions which tend to exculpate it. Milk is more especially associated with both the alimentary canal and the breast than water. It is not necessary to assume that the materies morbi lives mainly in the milk itself. Its habitat may be the epithelial cell lining the gland, the milk still being the carrier of the organism from the breast to elsewhere.

N. Senn summarizes the carcinoma question as follows: (1) the most notable contributions to the present status of the carcinoma question are to be found in the investigations which have thrown new light on the origin, growth, segmentation, and manner of local and general dissemination of the carcinoma cell. (2) Carcinoma is a tumor resulting from an atypical proliferation of epithelial cells from a matrix of em-

bryonic cells of congenital or postnatal origin. (3) The law of the legitimate succession of cell holds true in the origin and growth of tumors, both benign and malignant, as well as any production of normal and inflammatory tissue. (4) As carcinoma always originates from epithelial cells, primary carcinoma in mesoblastic tissue is impossible from a histogenic standpoint, unless a matrix of embryonic epithelial cells have become displaced during the development of the embryo, or embryonic epithelial cells have become buried in mesoblastic tissues after birth, by disease or injury. (5) The histology and histogenesis of carcinoma speak against the parasitic origin of this disease. (6) The stroma of carcinoma consists of pre-existing connective tissue fibers and their descendants. (7) Carcinoma cells usually multiply by irregular atypical karyokinesis, and this pathologic segmentation is an important indication of malignancy and as such is of considerable diagnostic value. (8) The progressive extension of a tumor to adjacent tissues and organs, regardless of their automatic structure, is a strong proof of its carcinomatous character. (9) Regional metastasis in carcinoma takes place exclusively through the lymphatic channel, and the pre-existing lymphatic structures take no active part in the origin and growth of the secondary tumor. (10) General dissemination of carcinoma usually takes place by direct implication of veins in the primary or secondary tumors. Carcinoma cells reach the venous circulation through the formation of an intra-venous tumor thrombus, through the carcinomatous endophlebitis, or finally

through perforation of the vein walls by isolated carcinoma cells. Retrograde intravenous extension through the lymphatics is due to the transportation against the venous current of many emboli or carcinoma cells surrounded by a mantle of blood corpuscles which move, step by step, upon the intima. Retrograde extension through the lymphatics may take place in the same manner, but there is very little doubt that it is more frequently the result of carcinomatous endolymphangitis. (11) The increase of carcinoma is seemingly shown by some recent statistics is more apparent than real. (12) Heredity is generally potent predisposing cause of carcinoma. (13) As a rule, carcinoma occurs in persons of advanced age, but occasionally is met with in persons less than 25 years of age, and the latter case the disease is characterized clinically by its great malignancy. (14) Carcinoma seldom follows a single injury, but develops more frequently in consequence of repeated injuries or prolonged continuous irritation. (15) Among the predisposing causes of carcinoma must be enumerated racial, climatic, topographical influences. (16) Chronic inflammatory products, cicatrices, and benign epithelial tumor produced local conditions favorable to the development of carcinoma. (17 and 18) The positive results of implantation and inoculation experiments have so far failed to establish beyond all doubt, upon a bacteriologic and histologic basis the investigations concerning the etiology of carcinoma and this fact does not at the present time warrant us to claim for this disease a parasitic origin. (19) The experience of centuries and the internal use

of innumerable remedies have demonstrated that so far carcinoma has not yet been materially influenced for the better by this mode of treatment. (20) Direct medication of carcinomatous tissue by parenchymatous injections have no influence in retarding or arresting its growth, while the injection of sclerogenic substances in the connective tissue around the border of the tumor appears to restrain the local extension of the disease by impairing the blood supply to the parenchyma or the tumor. (21) Local applications of any kind in the treatment of ulcerated carcinoma must be considered at best only in the light of palliative measures. (22) The actual cautery and chemical caustics have only a limited field of usefulness in the treatment of open inoperable carcinoma. They should never be employed in the treatment of closed carcinoma as a substitute for the knife. 23. The treatment of carcinoma by different sera has, without any exception, yielded only negative results. (24) The early and radical operative treatment of carcinoma offers the only prospect for permanently eliminating the disease. (26) A radical operation for carcinoma should never be attempted unless the local conditions and general good health of the patient are such as to promise an equivalent of the immediate and remote risks to life and comfort involved in the operation. (27) N. Senn concludes by taking it for granted that carcinoma is the product of an erratic, planless cell growth outside of the range of the physiologic influences which preside over and regulate normal growth and tissue repair.

OTHER TUMORS. SKIN DISEASES.

The inference is clear that X-ray

treatment is efficacious in lupus and epithelioma as well as superficial cancer and sarcomatous growths.

The beneficial influence is not limited to the tumor which is placed directly under the ray, but malignant growths beyond the radiance have been made to cease growing.

For superficial growths, Williams, directs that a tube of low resistance should be employed, and for internal growths a tube of high resistance should be employed.

The cone of rays is limited by means of a lead screen, to a size somewhat larger than the diseased area. He further claims that the exposure at each sitting should be five or ten or twenty minutes; but the writer considers that a shorter period, repeated twice a week will accomplish better results.

The effects of the X-ray burn is not always apparent soon after the use of the instrument, but may be delayed some weeks, some time within a month, before the deep seated tissues become involved. These results are very troublesome and call for energetic measures, but it does not devolve upon the writer to enter upon the curative measures to be used.

The shadowed impression upon the plate for three minutes has, under the writer's observation, given good pictures when developed and intensified, and this is a most effectual preventive of burns either superficially or deep seated.

The subject of X-ray treatment of malignant neoplasms was discussed recently by Williams and others before the New York Academy of Medicine, with the conclusion that the X-ray

treatment is an important agent for combatting malignant growths.

A case of Melano-Sarcoma has been reported by Carl Beck in which a good result followed prolonged irradiation of the tumor with the Roentgen ray. From various sources the evidence of the effect of the X-rays accumulates. The X-rays are a striking influence in cell life. Since this ray has such power on internal structures, it may be assumed that a greater action will be shown on the pathologic tissues of malignant neoplasms, and experience has confirmed this impression.

While I do not endorse all that has been written on these subjects, the reader is able to judge for himself as to the adaptability of some methods given below.

In the treatment of certain forms of cancer by the X-ray, F. H. Williams says that in his opinion we have here an agent which will cause superficial external forms of cancer to heal, and a treatment which may be employed without pain to the patient. He cites cases with photographs of epidermoid cancer of the lip, epithelioma of the eyelid, rodent ulcer on the side of the nose and cheek, and an epithelioma of the hand. The external growth which he has treated with good results have varied in duration from a few months to twenty years. His experience shows that the X-ray acts not merely as a caustic, but as a therapeutic agent, novel in its action; and these growths disappear without a burn being produced. The advantages may be summed up as follows: There is no pain, no burning of the tumor; some cases improve after a certain number of sittings without further treatment; the treatment does

not interfere with the work of the patient. The disadvantages are that the necessary apparatus is expensive and difficult to use; that great care is necessary, and that often the treatment must be continued for a long time.

Cooper, in *Medical Press and Circular* discusses various methods, including inoculation with streptococcus erysipellatis, subcutaneous injection of anticancerous serum and of Coley's fluid, (the mixed toxins of streptococcus erysipellatus and bacillus prodigiousus), oophorectomy, thyroid and lymph gland feeding, Roentgen rays, Finsen's light treatment, irritating injection, the production of aseptic suppuration, electricity and drugs. The review leads to the following conclusion: That in inoperable sarcoma, especially spindle-celled, the patient should have the option of the Coley's fluid given to him. In women about 40 oophorectomy should be proposed for cancer of the breast, and may be combined with thyroid feeding. In superficial malignant ulceration, Roentgen rays give good hope of improvement. Celandine is worthy of trial; also parenchymatous injections of acetic acid. Morphin should be pushed in hopeless cases.

ANODYNES IN CHILDREN.

Pettit (*Columbus Med. Jour.*, September, 1901) advocates the use of opium in children only when strongly indicated. It retains poisonous material in the alimentary canal; it checks secretions and hinders elimination; it parches the tongue and increases the fever. Many times nothing can take the place of opium, but frequently some other remedy will meet the indication.

Sponging with cold water relieves headaches in fevers; douching to relieve earache; evacuating stomach and bowels for colic; quinin for malarial and mercury for syphilitic pains. Acetanilid has not the disadvantages of opium but is more dangerous to life. The combination with each grain of acetanilid of one-fifth grain of milk sugar and sodium bi-carb., and one-twentieth grain of caffen and camphor monobrom, increases its safety and efficiency. Alcohol often proves useful, especially in bronchitis with painful cough. Let every resource be exhausted before prescribing an anodyne.—*International Medical Magazine*.

COMPOUND FRACTURES OF THE BONES OF THE HAND OR FOOT.

BY THOMAS H. MANLEY, M. D., NEW YORK CITY.

Fractures of the tarsal bones or their total dislodgment in luxation, most frequently ensue from the application of direct force.

When the parts are not completely crushed through, by the violence in action, or this is indirect, luxation commonly, simultaneously occurs with the shattering; or the bone, in some cases may be shot out through the integuments without coincident fracture. These bones lie superficially, but have a ponderous ligamentous and tendinous support.

Fracture, or compound luxation of the tarsus occurs only after great violence. They may occur after violent sprain—*entorse*, or twisting of the foot. Let us always bear in mind the vast vascular supply, and hence the marvelous reparative power of the parts

in this situation, and exhaust every possible expediency in this class before we even think of a sacrifice by amputation, as any sort of a stump which will comfortably support the body, is a great triumph over severance of the member, which, however skillfully performed, is a confession of the impotence of the healing art.

Any sort of a nondescript may slash through a limb and destroy it, but the acme of science comes in on its preservation.

With a proper knowledge of the anatomy of the tarsus and their functions, we can easily understand why, as a rule, in fracture, there is seldom displacement, and why too, that after repair, or even loss of one or more of them, yet a useful member may remain.

A few cases to the point may suggest a lesson here:

COMPOUND DISLOCATION OF THE TARSAL BONE.

Case I. Patient 36. Foot crushed by falling elevator. Fracture of all the metatarsus, the internal cuneiform projected out through the integuments over the dorsum of the foot. Patient in great shock; but little blood lost. Tarsus chipped away. Rigorous antiseptics; limb placed in comfortable position. Recovery rapid. Sued later for \$10,000 damages; jury gave him but \$1,200, as he had returned to his usual occupation of teamster, with apparently as good a limb as ever.

COMPOUND LUXATION OF FIRST METATARSUS.

Case II. Patient was young man; was injured by being thrown from a horse. Sustained a compound dislocation of the phalangeal head of metatarsal bone of big toe of right foot, phalangeal head being driven out

through stocking and leather of shoe. By enlarging the opening through the integument, it was possible to effect reduction, meanwhile making powerful traction on the toe. The break in the skin was left open, dressings and plaster applied. There was but little reaction, no suppuration, primary union, with very good fractional result followed.

COMPOUND FRACTURE OF SECOND METATARSUS.

Case III. Patient 35. Sustained a compound fracture of second and third metatarsal bones, by the crush of a horse's hoof, the sharp cog opening through the integuments and dorsum of foot. At first treated at home by tentative remedies; later, the aspect of the parts became somewhat menacing, and he was sent to hospital. After examination here, the case was pronounced a "dead foot," and immediate amputation was urged. This he would not consent to, and he was again brought home. Now he was seen by me. At this time the foot certainly presented a hideous appearance, and his general condition was very bad. For weeks the sufferings were so great that he had but little sleep, the appetite was gone, and a high temperature had greatly reduced his flesh. Foot was largely bloated, covered in places by water blebs, the skin broken in four different places, for the discharge of an intensely foul-smelling ichor. A probe passed in any of the sinuses at once came in contact with bone. But, the circulation everywhere was intact, and the toes showed an ample vitality.

By cocaine isolation I made larger incisions over the long axis of the dorsum of the foot. It was found neces-

sary to gouge away completely the diaphyses of the second and third metacarpal bones with the middle and internal cuneiform. All the sinuses and anfractuositities running to the surfaces and under the fasciæ and the intertendinous spaces, were well curetted; the whole well drenched with a 1 to 40 carbolic solution, drained and embalmed with absorbent dressings.

The sequelæ were simple. *Gangrene* was arrested, *restitutio ad integrum* ultimately quite complete, with a stiff but a solid, useful foot, as a reward for his stubborn refusal to permit of an amputation.

Toe-fracture usually results from a crushing force; they are ground through, most frequently, by the wheel of a vehicle. I have seen an elevator crush of the big toe with resulting fracture, nearly cost the patient the loss of his foot.

The ungual phalanx of big toe was ripped, the nail torn off, and second phalanx fractured. Infection followed with swift gangrene destroying this toe, the second and third; timely and drastic surgery saved the body of the foot, but appropriate treatment in the beginning would have obviated the necessity of the later large sacrifice of tissues that had to be made.

This was an injury primarily caused by a defect in the elevator machinery, and an action at law was contemplated, but I warned the young man that if the defence made proper resistance, he would certainly lose, as *mal-treatment*, and not the broken toe alone, was responsible for the mutilation.

FRACTURE OF THE BONES OF THE HAND.

We rarely see any other than *sprain-fracture*, chipping or splitting, in the *carpal bones*, which can only be detected

with certainty by the X-ray.

Metacarpal fracture of the open variety results only from direct violence. These bones are so bound together by a dense fascia, muscles and ligaments, that there is little or no displacement. We rarely see this fracture except on the infliction of great violence.

Finger-fracture.—As there is no muscular tissue in the finger shafts, the bones lie near the surface. The first or second phalanx may be broken by indirect force, but the third or ungual never, except by the direct. A fracture of an ungual phalanx is always a serious affair, because it often involves the loss of a joint, and like a deep puncture or laceration of the digital pulp, it may be the starting point of gangrene, or an infection which will spread through the lymph channels and menace the hand.

I know of no class of traumatisms which tests the practitioner's skill and judgment more than open-fracture of the finger. In many of the most mangled cases, it is surprising to note what may be accomplished here by thorough cleansing, the careful adjustment of the fragments, with proper dressings.

The accomplished practitioner will not despise small things, and in no class of apparently trivial injuries will his reward be more deserved than when he can spare a mangled finger, or any part of it. In these cases *dissoisement* or elimination is a most precious resource.

Professor Zimmer, of Berlin, has been investigating the causes of insanity among women, and has come to the conclusion that if women are admitted into competition with men the inevitable result will be a tremendous in-

crease of insanity among the women. He finds that the percentage of women teachers who become insane is almost double that of the men teachers. Inquiries were also made about women employed as telegraph, sales clerks, and in the telephone service, and furthermore, with regard to women engaged in the Swiss watchmaking trade. These inquiries showed that in the occupations mentioned a far larger proportion of women than men succumb to mental disorders.—*The Medical Times*.

ALBUMINOUS EXPECTORATION FOLLOWING THORACENTESIS WITH REPORT OF A CASE.* †

BY HERBERT W. ALLEN, M. D., MEDICAL
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HOSPITAL.

Albuminous or serous expectoration following thoracentesis is one of the rarest events in pleural effusion. The first author to mention the subject was Pinault, who in 1853 reported two cases. In 1873 Terillon¹ collected twenty-one cases. Following the appearance of his monograph the subject received for nearly two years a very animated discussion in the French journals and several additional observations were reported. West² in 1896 estimated that the total number of recorded cases was probably under fifty; while Ortner³ in 1899 thought that the total number of cases in the literature at the greatest was only about

thirty. This latter figure is probably too low an estimate.

Ewald⁴ states the phenomenon to have occurred in his practice in one out of twenty-six; Martineau in one out of fifty cases of thoracentesis; but these figures give an erroneous idea of its frequency. West has seen but one instance out of a very large number of cases and his experience agrees with that of other clinicians of large experience.

Among the records of the Johns Hopkins Hospital I have been able to find but one instance of the affection.

M. J. L., æt. 25, admitted to Professor Osler's ward May 15, 1901, complaining of pain in his stomach.

Family history was good; no tuberculous history.

Personal History.—The patient had always been very healthy. He had had none of the ordinary diseases of childhood except measles. He remembered no other acute illness. He denied venereal contagion; indulged only moderately in alcohol. Six weeks previous to admission he had an attack of sharp pain under the lower border of the ribs on the left side; this he thought had been caused by straining. He was easily relieved by internal medication.

Present Illness.—Nine days previous to admission he became overheated while on a long bicycle ride. In the evening he was seized with a sharp sticking pain under the lower left ribs; this was much exaggerated on taking a deep breath; it was relieved by pressure. There was no chill; patient does not think he had fever. He was able to continue at his work but felt badly, lost his appetite and complained of

*Published also in the Johns Hopkins Hospital Bulletin.

†From the Clinic of Professor Osler.

¹ Terillon. De l'expectoration albumineuse apres la thoracentese. Paris, 1873.

² West, Transactions of the Clinical Society of London, 1896, vol. xxix, p. 169.

³ Ortner, Wiener, klinische Wochenschrift, 1899, p. 1900

⁴ Ewald. Cf. ref. in Wilson Fox—Diseases of Lungs and Pleura, p. 170.

some shortness of breath. He occasionally had a slight cough but no expectoration.

Physical examination on admission showed a well-nourished, healthy looking man; mucous membranes of good color; the tongue clean. The patient was not suffering from dyspnoea; the respirations were thirty-two to the minute. The pulse was one hundred; of rather small volume and low tension.

Examination of the thorax revealed slight prominence of the left upper front with obliteration of the interspaces in the left axillary region. The expansion of the entire left side was diminished. Tactile fremitus was absent throughout the lower left axillary and subscapular regions. The percussion note was impaired and of Skodaic quality in the first left interspace. In erect posture flatness began at the level of the second rib; in recumbent posture at the level of the second interspace. The percussion note was flat throughout the axillary region and over the entire left back as high as the level of the spine of the scapula. On auscultation a few moist rales were heard over the left clavicle and the left supraspinous fossa. Over the area of flatness the breath sounds were very distant.

The right lung was practically negative; a few moist rales were heard at the extreme base.

Heart.—Cardiac impulse was seen in the third and fourth right interspaces almost to the nipple line. Relative dullness extended to a point eight centimeters from the median line in the fourth right interspace; absolute dullness to a point five centimeters from

the median line in the same interspace. The heart sounds were clear.

The remainder of the physical examination was negative.

Owing to the extent of the effusion it was deemed best to aspirate and accordingly, on May 16, a needle was inserted in the eighth interspace in the posterior axillary line. After 320 cc. of turbid, yellow fluid had been withdrawn the flow suddenly ceased and no more fluid could be obtained from that situation. The patient experienced no unpleasant after effects.

On May 20 a needle was again inserted in the left side posteriorly but after withdrawing 730 cc. of turbid fluid the aspirating apparatus began to leak and the tapping had to be abandoned. Again the patient experienced no unpleasant symptoms.

On May 23 a third attempt was made and this time 3100 cc. of fluid were withdrawn. The aspiration was done slowly and three interruptions were necessary in order to change receiving bottles. Towards the close of the operation the patient began to complain of slight shortness of breath and of a smothering sensation. After about half an hour there began a series of severe paroxysms of coughing, each being followed by profuse expectorations of serous frothy sputum. The paroxysms followed each other at very short intervals and the patient complained much of dyspnoea. After lasting about one hour the symptoms gradually subsided but the patient continued to expectorate for two or three hours longer.

The total amount of expectoration was not accurately measured but approximated one liter. It was very frothy, of a pale green color, translucent

ent, and on standing deposited a muddy sediment. Treated with nitric acid it gave an abundant precipitate of albumin. Examined microscopically it contained large numbers of bacteria; many flat epithelial cells; a few red blood-corpuscles and some polynuclear leucocytes.

A differential count of the leucocytes in the effusion showed: polymorphonuclear leucocytes, 1.7 per cent; large mononuclear leucocytes, 1.9 per cent; small mononuclear leucocytes, 96.4 per cent. No tubercle bacilli could be found in a centrifugalized specimen.

The subsequent history of the patient was satisfactory; the effusion did not reaccumulate and he was discharged June 12, 1901.

Terillon divides the cases of albuminous expectoration into three classes:

I. *Mild Form*.—The expectoration may come on immediately at the close of the thoracentesis; usually a short interval elapses. The patient after being rendered more comfortable by the removal of the effusion, commences to cough and to complain of some shortness of breath and soon to expectorate a considerable quantity of clear, frothy fluid. It is expectorated at times without intermission and accompanied by almost constant cough. After lasting for a variable length of time, the symptoms gradually subside. In this form the general condition of the patient is always good and never excites alarm. The quantity of the expectoration varies from a few grams to 800 grams.

II. *Severe Form*.—This differs from the preceding in the intensity of the dyspnoea, the abundance and persistence of the expectoration and the severity of the cough. The onset is us-

ually abrupt and the sense of oppression extreme. The symptoms rapidly reach their maximum intensity. The dyspnoea may be excessive and accompanied by a sensation of great anxiety. The patient shows signs of collapse and asphyxia; the face becomes cyanotic and the skin is covered with a cold, clammy perspiration. The symptoms may last several hours or an entire day but with varying intensity. The quantity of expectoration in this form varies between 1200 and 1500 grams.

III. *Grave Form*.—In this form the onset is sudden; the patient is suddenly seized with extreme dyspnoea and expectorates a large amount of frothy fluid; the symptoms grow rapidly worse, fluid gushes from the mouth and nose and the patient quickly dies of suffocation. In this form death may be very rapid, in some cases in less than fifteen minutes after the onset. Sometimes in fact the gravity of the accident is such that there is no time for the expectoration to appear. The patient succumbs to asphyxia and post-mortem the lung is found cedematous and the bronchi filled with fluid.

In all three forms the character of the expectoration is the same. The fluid is frothy; more or less viscid; of a slightly yellowish or greenish color. On standing it separates into three layers; the upper frothy and clear or slightly yellow in color; the middle clear or slightly cloudy according as the expectoration is abundant or small in amount; the lower denser and forming a granular deposit containing cell-traces of blood are present. Tested with heat and with nitric acid the fluid yields an abundant precipitate of albumin. Acetic acid precipitates a

varying quantity of mucin. Microscopical examination reveals large numbers of bacteria; cellular elements from the respiratory mucous membranes; some polynuclear leucocytes and occasionally red blood cells.

Onset.—Occasionally the expectoration begins before the tapping is completed or immediately after it. More commonly, however, an interval varying from five minutes to one or two hours elapses before the symptoms set in. Pepper⁶ states that in the only case observed by him the interval was eighteen hours. In the majority of cases it is less than one hour.

Duration.—This is variable. The attack may last only a few minutes; more commonly an hour or two; occasionally as long as one or even two days. In general the duration varies directly with the quantity of expectoration, but in a case of short duration the sputum may be very abundant.

The quantity of fluid expectorated is extremely variable; usually from 200 to 700 grams; sometimes as much as two liters.

Auscultation of the lung on the affected side reveals everywhere loud bubbling rales with fine crackles at the base; signs of an œdema of the lung. Rales may also be present on the unaffected side.

Serous expectoration is not necessarily associated with the use of suction in the removal of the effusion, for it has occurred in a number of instances where the fluid was removed by siphonage. In fact, it is stated to occur occasionally in pleural effusion before paracentesis has been performed.

In a few instances albuminous expectoration has followed several tapplings on the same patient. Behier records a case in which this happened four times and on both sides of the thorax. Gee⁶ reports a case in which it occurred three times in the same patient.

It is an interesting and instructive fact that in most of the cases of albuminous expectoration the amount of fluid removed from the pleural cavity has been large; a liter and a half or over; in three instances as much as five liters. In our own case it was three liters. Rapid withdrawal of the fluid seems also to increase the risk of albuminous expectoration. These facts have led several authors to recommend slow withdrawal of relatively small amounts of effusion; not more than 1200 cc. at one time and not to attempt to drain the pleural cavity at one sitting.

The number of fatal cases of albuminous expectoration is comparatively large; at least a dozen have been recorded. The general post-mortem appearances of the lungs are those of extreme œdema. The albuminous fluid may also be found filling all the bronchi, the trachea, the larynx, the pharynx and even the nasal fossæ. In a number of the fatal cases adherent pericardium has been found. Scriba⁷ and Ortnier each record a case in which in addition to the other findings a fibrinous plug was present in the bronchi of the affected lung.

Four main theories have been advanced to explain the phenomenon of albuminous expectoration:

⁶ Pepper, Philadelphia Medical Times, 1873-74, vol. 1, p. 718.

⁶ Gee, St. Bartholomew's Hospital Reports, London, 1884, v (l. xxii), p. 90.

⁷ Scriba, Deutsches Archiv für klinische Medizin, vol. xxxv, 1884-5, p. 328.

1. Perforation of the lung by the trocar.

2. Spontaneous perforation of the lung.

3. Reabsorption of the fluid remaining after thoracentesis.

4. Acute cedema of the lung.

1. Perforation of the lung by the trocar and discharge of the pleural fluid through the lung. The supporters of this theory lay especial stress on the similarity between the expectoration and the pleural fluid. But though having considerable resemblance to one another, in many cases they are quite different; the pleural fluid is often hemorrhagic while it is the exception for blood to occur in the expectoration. Prodhomme⁸ relates a case in which 2000 cc. of pus were aspirated from the pleural cavity followed by characteristic albuminous expectoration. Other objections to this theory are that (a) no perforation of the lung has ever been found post-mortem; (b) the danger of wounding the lung in tapping a large effusion is practically nil; (c) finally, if due to a perforation, the expectoration should begin at once and not, as is usually the case, after an interval.

2. Spontaneous perforation of the lung. Although spontaneous perforation of the lung in serous effusion does occasionally occur it is an exceedingly rare event; much less common than in empyema. If the fluid escaped through a perforation, pneumothorax should result and all are agreed that this is very unusual. Finally the quantity of expectorated fluid is often much larger than can be accounted for by this theory.

3. Reabsorption of the fluid remain-

ing after thoracentesis and its discharge through the pulmonary vesicles and bronchi. The chief argument against this view is that it is contrary to the teachings of physiology. The natural pathway for the absorbed fluid would be into the lymphatics and thence into the general circulation, and however rapid this process might be it would not be accompanied by exudation into the bronchi. Furthermore in pleurisy with thickening of the membranes the absorptive power is greatly reduced.

4. Acute cedema of the lung. This is the view that was advanced by Pinault in 1853, who described the first cases, and is the one that is accepted to-day by most observers. The physical signs observed during life as well as the post-mortem findings support it. The exact mechanism by which the cedema is produced is still an unsettled matter. Johnson⁹ thinks that while the lung is compressed by the effusion and its circulation is sluggish, coagula form in the minute vessels, especially the veins. As the effusion is removed the amount of blood flowing to the lung is increased, but owing to the obstruction offered by the coagula in the veins there results a passive engorgement of the capillaries and a consequent transudation of serous fluid into the air cells.

Duffin¹⁰ disagrees with Johnson and thinks the cedema is to be explained by the temporary damage done to the vasomotor nerves by compression; when this is removed the vessels dilate and remain so until the nerves recover sufficiently to cause contraction of the vessels.

Cohnheim has shown that the per-

⁸ Prodhomme, De l'expectoration albumineuse, Paris, 1874.

⁹ Johnson, British Medical Journal, 1873, vol. II, p. 479.
¹⁰ Duffin, British Medical Journal, 1874, vol. I, p. 372.

meability of the vessels in a lung which has been for some time compressed is considerably greater than that of a healthy lung. Most observers would explain the œdema by reason of this abnormal permeability and the rapid engorgement of the lung which follows the withdrawal of the pleural effusion.

But though this seems reasonable it yet remains to be explained why albuminous expectoration does not follow every thoracentesis inasmuch as these favorable conditions are present in every case.

Probably the explanation is to be sought in the abnormal pathological conditions which are so commonly found in the fatal cases, such as cardiac insufficiency; adherent pericardium; clots in the pulmonary vessels, etc. Ortnier, in a study of twelve fatal cases, finds in at least eleven the common factor of difficult mobility or complete immobility of the mediastinum, the result of adhesions to the lungs, the sternum or the pericardium. He concludes that the œdema has for its immediate cause an abnormal permeability of the blood vessels of the compressed lung, aided frequently by cardiac insufficiency. The sudden emptying of the pulmonary vessels causes increased flow of blood to the left heart; this is unprepared for the extra exertion and there results a disproportion in work between the right and left heart and consequently lung œdema. This œdema is the more easily produced when, owing to adhesions, the mediastinum is prevented from assuming its normal position as the effusion is drawn off.

The exact mechanism by which the lung œdema is produced must still be

left an unsettled question. West hints that a careful study of the lymphatics in these cases might aid in a solution of the problem.

NOTE.—Since this article was written two cases of albuminous expectoration following thoracentesis have been reported from this country. The first by Riesman appeared in *The American Journal of the Medical Sciences* for April, 1902, p. 620. A full bibliography accompanies the article. The second by Patek appeared in *American Medicine* for August 23, 1902, p. 281. Subsequent reports may show that this phenomenon is possibly not as uncommon as is generally supposed.

UPON THE PRESENCE OF THE TYPHOID BACILLUS IN THE URINE AND SPUTUM.

BY MARK W. RICHARDSON, M. D., BOSTON.

Read at the Boston Medical Library, Dec. '15 1902; reprinted from the *Boston Medical and Surgical Journal*, Feb. 6, 1903.

In the *Journal of Experimental Medicine* for 1898 and 1899 I published two articles; one upon the presence of the typhoid bacillus in the urine, and the other upon the use of urotropin as a remedy for this condition. Observations upon 103 cases of typhoid fever showed that typhoid bacilli were present in the urine of 22, or 21.35 per cent. of the cases.

A review of the literature since 1887 shows that 30 observers have made bacteriological investigations of the urine in 1,291 cases of typhoid fever. Of these, 278 gave positive results; a percentage of 21.5, which approximates remarkably closely to my own percentage of 21.35.

As to the use of Urotropin—this drug has been used by eight observers in 53 cases. All the reports have been favorable except that of Gwyn, who found that, in two cases of cystitis due to the typhoid bacillus, the organisms persisted, though in much diminished numbers, in spite of a long-continued use of urotropin. Gwyn prefers irri-

gation of the bladder with corrosive sublimate 1:50,000.

Very rarely the use of Urotropin has been followed by painful micturition and hematuria. These symptoms have, however, ceased immediately upon the omission of the drug, and no permanent injury to the kidneys has resulted.

Our present knowledge of the subject may be summed up as follows:

(1) Typhoid bacilli are present in the urines of about 21 per cent. of individuals afflicted with typhoid fever.

(2) The bacilli when present, are generally in pure culture, and their number is frequently enormous—many millions in each cubic centimeter of urine.

(3) The invasion of urine by the bacilli takes place in the later stages of the disease. Unless measures are taken to remove the organisms they persist frequently for weeks, occasionally for months, and rarely for years, and thus constitute (a) a danger to the patient himself (cystitis and possibly orchitis and epididymitis), and (b), what is much more important, a grave source of danger to the public health.

(4) The necessity for the rigid disinfection and supervision of typhoid urines is apparent.

(5) In Urotropin we have a drug which will, in the vast majority of cases, remove the typhoid organisms from the urine, not only in the cases of simple bacilluria, but also in those in which a cystitis has resulted. Very rarely an obstinate cystitis may require the use of vesical irrigations. Very infrequently a case will be seen in which the use of Urotropin is followed by hematuria. In such cases the drug should be omitted and irrigation of the bladder instituted.

(6) This subject in its relation to the public health is of the utmost importance. In my opinion it should be a fixed rule, and one rigorously enforced, that no typhoid convalescent be discharged as well until his urine has been proved permanently free from bacilli. In large hospitals, with their well-equipped laboratories, such supervision can be carried out with ease. Cases in private practice should be the care of the local boards of health. In this way only can we prevent a considerable percentage of our typhoid convalescents from becoming unsuspected foci for the further distribution of the disease.

As to the presence of the typhoid bacillus in the sputum, I was able in 1897 (*Journal of the Boston Society of Medical Sciences*, 1897, Nov. 16) to isolate this organism on three successive days from the sputum of a case of typhoid fever complicated with pneumonia. In 15 cases with no pulmonary complications the results were negative.

Since 1897 the subject has been investigated by a few observers. Their result showed that the typhoid bacillus may be present in the sputum during typhoid fever, especially if there be a coincident bronchitis or pneumonia. The typhoid bacilli are almost invariably associated with other organisms, such as the pneumococcus or the influenza bacillus, and are to be regarded rather as secondary invaders than as the primary cause of the complication. The sputum in these cases is generally hemorrhagic, and may contain large numbers of bacilli for considerable lengths of time. Seven weeks is the longest period of persistence recorded. The subject needs much further study,

but enough is known to show that in the typhoid sputum we have still another excretion which must be carefully disinfected.

Dr. F. C. Shattuck stated that for several years it has been his routine practice, alike in hospital and in private, to give his typhoid fever patients 8 to 10 grains of Urotropin three times a day for two days in every week, until convalescence is completed. This obviates all danger from the urine and has never produced any untoward symptoms.

**A REPORT OF TWO CASES OF
SEPTICÆMIA, SUCCESSFULLY
TREATED WITH H₂ O₂
MEDICINAL.**

BY E. J. MELVILLE, M. D., BAKERSFIELD,
VT.

Case 1.—Feb. 6, 1894, was called to see Homer B., aged 14, who had been ill with a swelling in right groin for three weeks. Had been treated with hot applications, etc., but during that time abscess continued to grow, and at the time that I first saw him fluctuation could easily be made out. Temperature 102.5 degrees F. Pulse 120. Great emaciation. Constant vomiting. Daily chills followed by copious sweating, denoting pus absorption. Diagnosed appendicular abscess and advised operation. This was done same day under local anesthesia.

Much pus escaped, and several small portions of fecal matter, denoting an opening into the gut.

Temperature remained high, and sweats continued for three days following operation, indicating the presence of pus. I then began the use of Mar-

chand's H₂ O₂ medicinal, (15 vol.) so as to destroy the pus and morbid element which were still there. I injected 4 oz. of H₂ O₂ with a glass syringe slowly, while patient was in the Trendelenberg position, and allowed it to remain about fifteen minutes. The boy was then lowered and laid upon his right side, when large quantities of pus, broken down tissue and gas flowed from wound. By gentle compression and massage of abdomen, much more was obtained. Large quantities of sterilized gauze were packed over the opening in right side.

The flushing out with H₂ O₂, etc., was repeated every twelve hours.

The improvement was prompt. Temperature reached normal, and remained so after 48 hours.

Wound was now washed out with the H₂ O₂ daily for four weeks, after which time the abdominal wound and fecal fistula were entirely healed. Patient has since developed into a full-grown laboring man, and has had no hernia nor any outward symptoms of his severe illness.

Case 2.—March 2, 1897, was called to see George T., a farmer aged 38 years, who had been in the care of a Christian scientist for four weeks for a large swelling in right side. The treatment consisted in endeavoring to persuade the man that he was not ill, and insisting that he take active exercise. Found patient in recumbent position with knees flexed upon abdomen, and suffering intense pain over right side of abdomen, which was filled with a soft fluctuating mass. Temperature 103.8 degrees F. Pulse 130. Opened abdomen under local anesthesia and evacuated three quarts of foul smelling pus.

Used 4 oz. H₂ O₂ full strength, slightly warmed, after pus had ceased to flow, and repeated procedure every twelve hours.

This caused cessation of all untoward symptoms for eight days, when chills and fever returned.

Another swelling was then noticed in right lumbar region, which, upon opening, gave one quart of pus.

Flushed this second abscess in same way. The temperature soon reached normal, and patient made an uneventful recovery with exception of swelling of inguinal glands in left groin, which yielded in three days to hot fomentations.

For conclusion I might say, that in the above cases I used no medicines internally, and nothing externally but clean linen, plain gauze and H₂ O₂ (Marchand's).

The operations performed were simply opening abscesses, no drainage tubes, no flushing with salt solution or water, and no packing of abscesses.

Though I used the H₂ O₂ in large quantities, and made no especial effort to see that all the solution returned, and though it was used over a period of several weeks, no untoward symptoms developed from its use.

The above gratifying results induced me to use Hydrozone (which yields 30 times its own volume of nascent oxygen instead of 15 volumes) in other cases where a large amount of pus was present, with such good results that I am now giving the preference to this very strong solution.

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ORIGINAL ARTICLES of practical utility and length are invited from the profession. Accepted manuscripts will be paid for by a year's subscription to this journal and one hundred extra copies of the issue in which such appears if desired.

Editorial.

CASE OF ARRESTED DEVELOPMENT OF THE CEREBELLUM AND ITS PEDUNCLES.

A female child, six weeks old, with hydrocephalus, talipes varus, healed lumbar spina bifida, and no power of motion in either leg, died of gastroenteritis. At the autopsy the cord was found attenuated throughout; in the lumbar region it passed into a mass of cicatrix at the level of the spinal bifida; in the dorsal region it was divided into equal halves, between which an exostosis projected; the spinal roots and nerves appeared normal; around the cord and between it and the dura was a quantity of loose friable tissue. In the medulla there was no prominence corresponding to the anterior pyramid and

olive, and the medulla passed insensibly into the pons. The cerebellum was extremely rudimentary, only represented by a few minute leaflets. The mesencephalon was represented by a single large structure, no trace of a division into anterior and posterior corpora quadrigemina being seen. The cerebrum exhibited a condition of marked hydrocephalus. The case exhibits therefore a condition of arrested development of the whole of the central nervous system from the mesencephalon downwards. The association of this with deformities of the surrounding parts is of importance; that is to say, the spina bifida, the exostosis described, and the transformation of the membranous coverings. From the point of view of pathogenesis the following classes of cases of cerebellar atrophy may be distinguished:

1. Cerebellum almost completely absent on one or both sides, condition primarily due to arrest of development.

2. Cerebellum congenitally small, but of normal histological structure.

3. Comprises the majority of cases. There is an atrophy with a general sclerotic condition. The cortex appears to be primarily affected, either in whole or part, the disappearance of white matter corresponding to the extent of cortical defect. There are often indications of chronic meningitis and vascular degeneration. The symptoms are those of epilepsy with mental enfeeblement, and in a number of cases, date from the occurrence of some acute infective disease. The vascular changes are usually secondary. Probably an acute disease acts as an exciting agent in developing a previously existing mor-

bid condition and leading to retrograde changes in the nervous tissue.

4. Primary vascular disease attended by chronic interstitial inflammatory changes, chiefly affecting the white matter, a cirrhosis cerebelli—comparable to cirrhosis of the kidney. This is a rare condition.

5. A primary atrophy affecting the cerebellar cortex, the nuclei of the pons and in the inferior olives accompanied by marked atrophy of the middle peduncle and partial atrophy of the restiform body. This also is a rare condition. Three cases have been described by Thomas and Dejerine and the atrophy of cells is considered to be comparable to the Duchenne-Aran atrophy of the ventral cornua.—*The British Medical Journal*

ON SUPRARENAL HEMORRHAGES

From a study of cases of hemorrhage into the suprarenal body occurring in adults and in infants, the author finds that small ecchymoses occur in the course of many infectious diseases and are to be looked upon as toxic hemorrhages. Hemorrhagic infarction of both suprarenals often causes death with symptoms of peritonitis and collapse, although these signs may be absent. Occasionally large hematoma may result from suprarenal hemorrhages, and the latter may be caused by (a) traumatism, under which head the hemorrhages in the newly-born are to be classed; (b) the hemorrhagic diathesis; (c) thrombosis of the suprarenal veins; (d) bacterial capillary emboli. The third and fourth are the most frequent causes. Thrombosis of the suprarenal veins is of the marantic variety and occurs, as a rule, in chronic diseases only;

the special distribution of the vessels in the suprarenal bodies favors its occurrence. Emboli of bacteria were observed in cases clinically and anatomically free from any signs of sepsis. Suprarenal hemorrhages may lead to destruction of those organs.—*Virchow's Archiv.* Vol. clxx., No. 2.

Editor Times and Register:

DEAR SIR.—Three times during the last half century medical manifestos have been issued giving the opinion of physicians on alcohol. The first was issued in 1839, and was signed by 86 persons. The second in 1847, and was signed by 2,000 physicians, and the third appeared in 1871, with the signatures of over 4,000 physicians, including the names of many leading physicians in all parts of the world. A fourth declaration of opinions is now being circulated for signatures, and reads as follows:

The following statement has been agreed upon by the Council of the British Medical Temperance Association, the American Medical Temperance Association, the Society of Medical Abstiners in Germany, and leading physicians in England and on the continent. The purpose of this is to have a general agreement of opinions of all prominent physicians in civilized countries concerning the dangers from alcohol, and in this way give support to the efforts made to check and prevent the evils from this source.

In view of the terrible evils which have resulted from the consumption of alcohol, evils which in many parts of the world are rapidly increasing, we members of the medical profession, feel it to be our duty, as being in some sense the guardians of the public health, to

speak plainly of the nature of alcohol, and of the injury to the individual and the danger to the community which arise from the prevalent use of intoxicating liquors as beverages.

We think it ought to be known by all that:

1. Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time, prevents perfect mental action, and interferes with the function of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgment and of the will, and having other markedly injurious effects. Hence alcohol must be regarded as a poison, and ought not to be classed among foods.

2. Observation establishes the fact that a moderate use of alcoholic liquors, continued over a number of years, produces a gradual deterioration of the tissues of the body, and hastens the changes which old age brings, thus increasing the average liability to disease (especially to infectious disease), and shortening the duration of life.

3. Total abstainers, other conditions being similar, can perform more work, possess greater powers of endurance, shortening the duration of life. recover more quickly than non-abstainers, especially from infectious diseases, while they all together escape diseases specially caused by alcohol.

4. All the bodily functions of a man, as of every other animal, are best performed in the absence of alcohol, and any supposed experience to the contrary is founded on delusion, a result of the action of alcohol on the nerve centers.

5. Further, alcohol tends to produce in the offspring of drinkers an unstable

nervous system, lowering them mentally, morally and physically. Thus deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have hitherto been little addicted to this vice. Since the mothers of the coming generation are thus involved, the importance and danger of this increase cannot be exaggerated.

Seeing, then, that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease, and death, not only in the case of those who take such beverages, but in the case of others who are unavoidably associated with them, we feel warranted, nay, compelled to urge the general adoption of total abstinence from all intoxicating liquors as beverages as the surest, simplest, and quickest method of removing the evils which necessarily result from their use. Such a course is not only universally safe, but is also natural.

We believe that such an era of health, happiness and prosperity would be inaugurated thereby that many of the social problems of the present age would be solved.

This declaration has already received the signatures of over 1,000 physicians in all parts of the country. I have been appointed chairman to present this manifesto to American physicians for their endorsement. I should be very glad to receive the name, title and address of any physician who is willing to aid by his signature to correct pub-

lic sentiment and assist in the prevention of one of the great evils of the age. This is purely a scientific effort for the purpose of having a general consensus of opinion of the leading physicians of the world, and it is assumed that American physicians are equally enthusiastic and prompt to lend their signatures to this statement as in the wine-drinking countries of Europe. A postal card with address and title is earnestly solicited from every medical man who would like to be represented in this great movement for a clearer comprehension of the subject. Address

T. D. CROTHERS,
Hartford, Conn.

**GLYCO-THYMOLINE (KRESS) AS A
THERAPEUTIC AGENT IN
TREATMENT OF NASAL
CATARRH.**

BY E. L. B. WOODWARD, M. D., LINCOLN,
NEB.

I am becoming more and more of the opinion that the doctor ought to know his therapeutic agents and his patients so thoroughly that he can say with accuracy just what the result of any therapeutic measure will be. In this paper I shall report what Glyco-Thymoline did and did not do for me.

These cases are not selected cases, in any other sense than that they were typical of various forms seen in every day practice. I have made an especial endeavor to determine just how much Glyco-Thymoline can be expected to do.

Case 1.—Acute Septic Rhinitis.—I have records of several cases of this kind treated with Glyco-Thymoline, with gratifying results. One especially was that of Miss L. D., fibrinous rhinitis, school girl, aged 12. Had what she called a cold in the head for one

week; upper lip was excoriated, nose absolutely blocked with white membrane very like that found in the throat of a diphtheria patient. It all came away readily without bleeding. I cauterized whole surface with a solution of silver nitrate, 40 grains to the ounce. Gave her a K. & O. nasal douche and Glyco-Thymoline, and sent her home with directions to cleanse the nose every hour. She reported next day as fine as you please. I confess I was a little surprised at the rapid cure.

Case 2.—Simple Chronic Rhinitis. Pharyngitis and Laryngitis.—Mr. F., of Lincoln, professional singer. Patient applied for treatment November 23, 1900, because of thickness of speech. Nasal respiration very difficult. Inferior turbinates were very much swollen (not hypertrophied), so much so that one or the other pressed upon the septum all the time. Peculiar sense of obstruction about throat, especially when attempts were made to swallow. There was a rather free secretion of mucus, which necessitated frequent use of handkerchief, together with considerable hawking and spitting. This condition had gradually developed in past eight or ten years. To determine what Glyco-Thymoline would do, absolutely unaided, I had him use it as douche and gargle three times a day, and gave as nearly perfect rest to the voice as possible. At the end of two weeks he reported the turbinates very much reduced, free nasal respiration established, very little discharge; was so comfortable that he did not feel a need for further treatment, but as the vocal cords and larynx were still somewhat catarrhal, I made local applications of zinc chloride, 10 grains to the ounce. At

the end of two weeks this produced a perfect result. He is to continue using Glyco-Thymoline daily for a while.

* Case 3.—Atrophic Rhinitis.—Mrs. P., aged 38; housewife, Lincoln; bothered with catarrh from girlhood. Applied for treatment February 12, 1900, because of excessive dryness and itching of nares. Upon examination, found the turbinates very much reduced in size. Discharge dried into crusts which clung to both septum and turbinates. As to odor—this case was no exception to its class. I gave her Glyco-Thymoline to use as a coarse spray three times a day, or as much oftener as she required. While it gave her great relief, her case did not progress as fast as we thought it ought, so I had her come to the office three times a week where I cleansed nose thoroughly with hydrogen peroxide and afterwards sprayed with Glyco-Thymoline. Finally I made a very thorough application of balsam of Peru, the Glyco-Thymoline to be continued at home as before. Before the end of one month crust and the disagreeable odor were matters of the past. The whole nostril had a very much more healthy appearance. I saw this case a few days ago and she tells me that she is comfortable, but always keeps a bottle of the red medicine on hand. I cannot say this case is cured, but I believe she is as nearly cured as such a case ever gets.

Case 4.—Hypertrophic Rhinitis.—Mr. W. A., aged 40, Greenwood, Neb. Good family history and fairly good physical condition. Deficient nasal respiration. Breathes through mouth most of the time, especially at night. Gets up in the night, mouth dry and nasty, hawks and spits; large quanti-

ties of foul smelling muco-purulent matter. This was so very repulsive that it often caused nausea and retching. Began on Glyco-Thymoline with watch-case atomizer (as he could not be at home.) While discharge was modified, turbinates were only slightly reduced. These were reduced to normal with the cautery and Glyco-Thymoline continued. The reduction by cautery required four sittings, one week apart; at the end of this time the patient was very much gratified at results. Annoying symptoms all gone.

To recapitulate:

1. In the acute septic forms of catarrh Glyco-Thymoline is a very grateful, as well as an efficient lotion.

2. In simple chronic rhinitis Glyco-Thymoline is especially useful, with my cases everything but a specific.

3. Hypertrophic rhinitis, Glyco-Thymoline keeps parts free from discharge but removes hypertrophy too slowly for most cases in practice. . .

4. Atrophic—Very pleasant and efficient douche, but in my case have been able to hasten process by balsam of Peru and other stimulating remedies.

Is catarrh curable? Yes, certainly. To stay cured? Unfortunately one attack does not produce immunity.—*Western Medical Review*, March, 1901.

* More rapid and effective results from the use of Glyco-Thymoline are obtained when application is made by means of the K. & O. Nasal Douche (which can be carried conveniently in the pocket.)

The amount of solution that it is possible to get to the turbinates with an atomizer in the hand of the patient is so small that the proper effect is not obtained.

When Glyco-Thymoline is applied by Douche as per directions below, it can be held directly in contact with the turbinates for two or three minutes, thus giving effects that are not obtainable otherwise.

SPECIAL DIRECTIONS FOR USE OF THE K. & O. NASAL DOUCHE.

One of the objects in the application of Glyco-Thymoline to the nasal cavity is to retain it in direct contact with the membrane for at least two minutes; this can be done very simply and effectively as follows:

Put into the Douche one to two teaspoonfuls of Glyco-Thymoline, filling it with hot water (never use cold). With the index finger over the inlet control the flow, insert the nozzle into the nostril and hold the head well back. While allowing the solution to run into the nose, breath through the mouth (pant as it were); this closes up the passage into the throat and enables you to fill the entire nasal cavity. As soon as it is full, take the Douche away, pinch the nostrils together and throw the head well forward; hold the solution in the nasal cavity for a couple of minutes and repeat in the other nostril. Clear the head gently to avoid forcing products of inflammation into the Eustachian Tubes, as the Glyco-Thymoline loosens up all the catarrhal crusts.

Do not blow the nose until you have thoroughly cleared the nose and throat.

If the catarrhal condition affects the throat, gargle with one or two teaspoonfuls of Glyco-Thymoline diluted with a tablespoonful or two of hot water.

BUFFALO, October 18, 1902.

To the Maltine Company, New York:

GENTLEMEN.—Your Committee selected to award the two prizes offered

by your firm for Essays on Preventive Medicine, or some subject connected therewith, begs leave to report that the large number offered in the competition, (being two hundred and nine in all) and the general high grade of their excellence, has made the matter of selection very difficult. After critical examination and mature deliberation, however, your committee has awarded

The First Prize to the essay entitled "The General Principles of Preventive Medicine," signed, "Alexine," and

The Second Prize to the essay entitled "The Medical Inspection of Schools, a Problem in Preventive Medicine," signed "Broad."

In submitting this report the Committee congratulates you upon the wide spread interest which you have aroused in the very important subject of Preventive Medicine, and it congratulates the medical profession and the public upon the great good that will follow the publication of the valuable addition to literature thus evoked by your enterprise.

Respectfully Submitted,

DANIEL LEWIS.

CHARLES A. L. REED,

JOHN EDWIN RHODES.

Committee.

ANTIPHLOGISTINE VS. PNEUMONIA.

How does Antiphlogistine abort pneumonia, and further how does Antiphlogistine resolve pneumonic consolidation? These queries are very often made by acute observers who have attended case after case of pneumonia with favorable termination under the influence of Antiphlogistine.

The action of Antiphlogistine is de-

pendent upon well-defined physiological laws—that a most important reflex association exists between the vessels of the skin and the underlying tissue; that, when the superficial blood-vessels dilate, the deep-seated ones contract. Continuous stimulation of the cutaneous reflex maintains continued relief by persistent contraction of vessels in the inflamed area of lung tissue. Such governing action prohibits extension of the products of inflammation through infiltration by effecting rapid absorption and elimination of toxins. The infected area becomes self-limited as the adjacent blood-vessels supply well-aerated blood to compensate for the surcharged venous blood due to pulmonary consolidation. Under reflex control Antiphlogistine resolves hepatization of lung tissue and through osmosis and dialysis assists the superficial blood-vessels and lymph spaces to drain the hyperæmic parts by direct capillarity. Lessened blood-pressure prevents administration of whipping medication to the over-burdened heart.

COCA AS A DEPURATIVE OF THE BLOOD.

The problems that confront the practitioner during the heated months, are usually the outgrowth of previous unsoundness of health which have settled into a condition more or less chronic, or those more acute ills engendered through overindulgence in such bounties as are now lavishly displayed. In either of these broad classes, when physical strength and mental power is at a low ebb, there is no one remedy better adapted than Coca. It is an adjuvant to all known forms of treatment. The knowledge of this drug has come to the

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busy scientific world through its efficacious use in allied conditions requiring the most urgent support to maintain life. The Andean traveler toiling up rugged steeps through bleak and uninhabitable regions, at an altitude where sheer existence is sustained with difficulty, is supported in his efforts through the use of Coca, the leaves of which he chews unceasingly. The seemingly marvelous action of these, apparently simple leaves, has only recently been learned through a study of the physiological properties of their constituents.

Coca primarily acts as a depurative of the blood, and as it is well known, when this nutrient stream is freed from the products of tissue waste—and not until then—the muscular and nervous systems are in a condition where physiological repair can be effected. Whether the exhaustion be of a temporary nature, as that induced through excessive physical exertion, or be due to the prolonged presence of disease, the products of combustion in the human machine—the ashes and the clinkers—must first be thrown out in order that the entire system shall work more effectively. Coca, it is known, will bring about this excretive action in a phenomenal way, and when the volatile principles of this drug are carefully preserved through skilled manipulation—such as in the famous Vin Mariani—there is presented a depurifier and supporter *par excellence*.

NOTES OF A CASE OF SCIRRHUS-CANCER OF THE BREAST.

Treated by J. W. Silvana, M.D., Philadelphia.

During the past summer, through the courtesy of Dr. Howard Patterson, of

936 Lehigh Ave., this city, a very interesting case of cancer of the breast came under my care, history of which follows:

Mrs. K., age 34, of German birth, married. No family history of malignancy that could be traced. Had been an office patient of the doctor's for several months, during which period she had complained of sharp, darting pains in the right breast, and about every ten days or two weeks, small abscesses would form, necessitating drainage and antiseptic dressing.

When I first saw her she had lost 28 pounds in weight within the previous twelve months, and along with the discoloration of the lower half of the gland, there were two small nodules about the size of a large marrowfat pea, shiny in appearance, located directly under and about one-half an inch from the nipple, and in addition, an abscess containing thick, bloody pus. Am pleased to state that only one more abscess appeared after I took charge of the case.

Gave her the first injection of the "Alexander Treatment," 7 M, on the 11th day of June, and increasing dose 2 M each day for ten days, making a circle or zone about one inch from the discolored parts, depositing from 2 to 4 M in a place, always keeping in the healthy cellular tissue. After reaching the maximum dose of 25 M, dropped back to 10 or 12 M, given in the same manner every third day for two weeks, then decreased the dose to 8 M twice a week, and continued semi-weekly, in doses of about 5 M, until the 27th of September. At that time every trace of the malignant condition had entirely disappeared, and both Dr. Patterson

and the patient were satisfied that there was no longer necessity for continuing the treatment, and as a consequence I discharged her as cured.

She has now returned to her work and goes about her daily duties, feeling as strong and hardy as ever. Will add that there was no glandular involvement, and while no microscopic test was made, she was carefully examined by several physicians in consultation with Dr. Patterson, and all pronounced the case malignant and advised amputation several months before she came under my care. Totally opposed to the knife, she decided to wait and take her chances. Taking into consideration the final outcome in the case, she is extremely thankful that she waited.

In a letter from Dr. Patterson under date of Nov. 29th., he makes the following statement: "I have recently examined the case of scirrhus cancer of the right breast treated by you with the "Alexander Method," and I find her in perfect physical condition. As you know, she was treated seventeen weeks, and at this time I fail to find any trace of malignancy. She eats and sleeps well, has increased in weight more than 20 pounds, and both her husband and herself are extremely grateful for such a marvelous result in so short a space of time."

Feb. 12th. The patient is in good health at the present date of writing.

A Most Seasonable Suggestion.

As the time is present when there is demand for cough remedies it will not be amiss to present a suggestion and a good remedy. In place of opiates which always dry up expectoration, disturb digestion, cause constipa-

tion, and render the patient uncomfortable and drowsy, it is desirable to employ the most efficient and popular cough sedative of the present day, namely; Antikamnia & Heroin Tablets. This remedy relieves cough by its soothing effect upon the air-passages, but does not interfere with expectoration, and, in fact, renders it easier by stimulating the respiratory muscles. Onyl a very small dose, one tablet, every one, two or three hours, for adults, is required to produce a satisfactory result.—*Notes on New Pharm. Products.*

THE EFFICACY OF COLLARGOLUM IN THE TREATMENT OF INFECTIOUS DISEASES, AND THE MANY INDICATIONS FOR ITS USE.

BY DR. NETTER, ASSOCIATE PROFESSOR AT THE UNIVERSITY, VISITING PHYSICIAN TO THE TROUSSEAU HOSPITAL, PARIS.

Professor Netter details at length 11 cases treated with endovenous injections of Collargolum and inunctions of Unguentum Crede, with brilliant results, all of them recovering rapidly. They consisted of one acute pericarditis, one pneumonia with purulent effusion; one cerebro-spinal meningitis; a grave complicated scarlatina; two severe diphtherias; an acute ulcerative tuberculosis; three cases of typhoid; and one pyæmia.

The favorable action of Collargolum is first evidenced by the fall in temperature, which occurs either suddenly or gradually. This is particularly prompt when the medication is administered early. At the same time occurs a remarkable improvement of the general

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condition of the patient, the quick return of strength and appetite recalling the phenomena so often noticed after the injection of antitoxin.

The local changes are sometimes equally rapid. By the next day phlegmons and gland irritations have lost their inflammatory character; and swellings are often so diminished that only traces of them remain. Ganglionic enlargements promptly resolve; pleuritic suppurations are absorbed; pericarditis and pneumonia are favorably influenced; and even valvular lesions disappear.

Based on his observations, Netter recommends Collargolum in pyæmia

septicæmia, in all the various forms of puerperal infection, in infectious endocarditis, cerebro-spinal meningitis, scarlatina, mixed diphtheria, grave typhoid fever, in certain tuberculososes of the pneumonic form, in pneumonia and in rheumatism with a tendency to visceral complications. In most cases injections of the Crede ointment suffice for the introduction of the medicament into the system. But when an immediate and vigorous action is urgently needed, recourse to intravenous injections should be taken.—*Abstracted from Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, No. 37, Dec. 18, 1902.

Debt is a monster millstone about the neck of many a struggling mortal, and is answerable for much of the current mental, moral and martial misery and for social crimes innumerable.

Spurgeon's now much-quoted Jeremiad against debt, dirt and the devil may sound a trifle blunt, coming from a reverend source, but it is a valuable object lesson for the medical profession.

No physician can afford to be indifferent in the filling of his prescriptions.

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